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ABSTRACT

Initiated in 1994, Structured Learning Assistance (SLA) is a research project whose purpose is to determine if, for certain courses, grades can be improved by requiring students to attend weekly practice workshops. These SLA workshops assist students in developing the background needed to connect to the course content and to develop and apply the learning strategies most appropriate to the content area. This report details the 3-year findings of the SLA project, as well as findings for all students who participated in it during the 1996-1997 academic year, with a focus on minority students. Results indicated that SLA can significantly improve student pass rates, even for at-risk students. In nearly 85% of the 42 courses offered with SLA support, the SLA students had higher pass rates than those of all other university students taking the same courses. This improvement was especially marked in the mathematics courses, where the average pass rate increased anywhere from 24 to 45 percent. Student evaluations of the SLA project are included. Appended are minority and total student data for fall 1996 and winter 1997, statistics on the project's 3-year averages, and pass rate by subject area. (EMH)

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FERRIS STATE UNIVERSITY

Structured Learning Assistance Project

Final Report Fall Semester 1996 Winter Semester 1997

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Report Includes Data
on the
Three-Year Findings
of the SLA Project

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Final Report on the Ferris State University Structured Learning Assistance Project Fall Semester 1996 and Winter Semester 1997

Structured Learning Assistance is a research project funded by a Select Student Support Services (4-S) grant from the Office of Equity, Michigan Department of Education. Its purpose is to determine if, in certain high-risk-for-failure courses, C- or better pass rates can be improved by requiring students to attend 4 hours of weekly, directed practice workshops when their grades fall below a 2.0.

The SLA project integrates a content-specific cognitive instruction model with required "gateway" courses. For each course section, four hours of weekly directed practice workshop experience for students functioning at or below the C grade level is required as a means of ensuring content mastery, skills development and academic success. **FSU believes this is the only project of its kind in the country that offers academic assistance as part of the content class process and requires the student to make use of the assistance.**

The SLA workshops assist students in developing the background needed to connect to the course content and to develop and apply the learning strategies best suited to the content area. The workshops also help the students develop study strategies that include forming learning teams that can assist them in their studies outside of class. Professional facilitators conduct the workshops. The facilitators attend the class lecture along with the students and then work in collaboration with the instructor to develop the materials needed to facilitate the workshops.

This 4-S funded project began in 1994 and has just completed its third full year of operation. The project has served **over 5000 students** in the three years of its existence. **Forty-two different courses representing 16 different disciplines or program areas have been offered with SLA workshops since 1994.**

This report will detail the findings for all students that took part in the project during the 1996-97 academic year and all minority students that took part in the project during the same time period. The report will also detail the three-year findings of the SLA Project. The funding of the 4-S grant was to assist minority students, but allowed all other students enrolled in SLA courses to be assisted as well.

4-S Project Goal

The goal of the 4-S grant project is for SLA students to improve their C- or better pass rates in gateway courses by a minimum of ten percent (10%) over the C- or better pass rate average of each of three groups of students:

- A. All students that took the course over the past three years
- B. Control groups identified by the project
- C. All students that took the same course without SLA assistance during the same semester.

PART I FINDINGS -- TOTAL STUDENT POPULATION

Description of the SLA Population Fall 1996

There were 1167 students who participated in the SLA project. Their average ACT composite was 17.6. They had an average high school GPA of 2.54. The population earned an average of 10.6 college credit hours fall semester 1996.

Description of the Control Group Population Fall 1996

There were 455 students who participated in the control group sections. Their average ACT composite was 18.0. They had an average high school GPA of 2.67. The population earned an average of 11.0 college credit hours fall semester 1996.

Summary of Findings Fall Semester 1996

- *1. In **85 percent of the courses** offered with SLA support during fall 1996, the SLA population **exceeded the pass rate average** of all other university students enrolled in the same courses by **12 percent or more**.
See Appendix A Table 2
- *2. In **63 percent of the courses** (16 courses), the SLA population **met or exceeded the project goal by earning a 10 percent or higher C- or better pass rate** as compared to the C- or better pass rate average for all sections of the course taught over the previous three fall semesters.
See Appendix A Table 3
3. In **86 percent of the SLA courses** that had **paired control group sections**, the SLA students **exceeded the C- or better pass rate average by eight percent or more**. The **average improvement** in pass rate of the SLA students over the control group students was **19 percent**.
See Appendix A Table 1
4. Seventy-five percent (75%) of the students enrolled in SLA during fall semester 1996 said they would recommend to other students to take an SLA course. Only nine percent of the students enrolled in SLA courses during fall 1996 indicated they would not take another course with an SLA workshop.
Complete Finding of Student Evaluation on Page 15

* Percentage reported as relative improvement.

Description of SLA Population Winter 1997

There were 1078 students who participated in the SLA project. Their average ACT composite was 17.5. They had an average high school GPA of 2.6. The population earned an average of 10.5 college credit hours winter semester 1997.

Description of the Control Group Population Winter 1997

There were 505 students who participated in the control group sections. Their average ACT composite was 18.5. They had an average high school GPA of 2.75. The population earned an average of 11.2 credit hours winter semester 1997.

Summary of Findings for Winter Semester 1997

- *1. In **75 percent of the SLA courses**** offered winter semester, the SLA population earned a pass rate that was **10 percent or higher than the pass rate average of all other university students** who took the same courses during winter 1997.
See Appendix B Table 2
2. In **82 percent of the courses**, the SLA students **exceeded the pass rate average** of all other students who took the same courses over the past three years by **nine percent or more**.
See Appendix B Table 3
- *3. In **67 percent of the courses where control group sections were used**, the SLA students **exceeded the control groups by 10 percent or more**. The average pass rate improvement of the SLA students over the control group students in these eight courses was 36 percent.
See Appendix B Table 1
4. Ninety-one percent (91%) of the students taking SLA courses winter semester indicated they would recommend enrolling in an SLA course to another student.

* Percentage reported as relative improvement .

** NURS 222 was not included in this data as 100% of both the SLA students and the non-SLA students earned a C- or better grade

Fall Semester 1996 Complete Findings

SLA workshops were offered as part of 16 courses (42 sections) during fall semester 1996. These course offerings were from the Colleges of Business, Technology, Allied Health, and Arts and Sciences. Twenty-three professors took part in the SLA project and the project served 1167 students.

The findings discussed in this report have been divided into three parts.

1. Part A is a comparison of the course pass rates in the SLA courses with the pass rate averages for the same course over the past three years. The measure used in this comparison is those students earning a C- or better in the course.
2. Part B is a comparison of the SLA population with all other university students who took the same course fall 1996.
3. Part C is a comparison of the SLA course sections with their control groups. The control groups were sections of the same course, taught by the same instructor, using the same tests and same grading procedure. T-test analysis was done in comparing the groups using input variables of ACT composite and high school GPA.

Fall 1996 Findings -- Course Pass Rate Comparisons

- A. **Comparison of C- or better course pass rate averages between the population in SLA and all other students who took the course over the last three fall semesters.**

Eighty-eight percent (88%) or 14 of 16 SLA courses **exceeded the pass rate average** for the course. Of these 14 courses, 10 exceeded the pass rate average by 10 percent or more. **Fifty-six percent (56%)** of the SLA courses **exceeded the pass rate average by 15 percent or more.**

See Appendix A Table 3

- B. **Comparison of C- or better course pass rate averages between the SLA population and all other university students who took the same course fall 1996.**

Ninety-two percent (92%) or 12 of 13 SLA courses, in which other sections were offered, **exceeded the pass rate average** of all other university students who took the same courses during fall 1996. **Eighty-five percent (85%)** of the SLA courses **exceeded the pass rate average** of all other university students by **10 percent or more.**

See Appendix A Table 2

C. Comparison of SLA course pass rates C- or better with the Control Group section pass rates fall 1996.

One hundred percent (100%) of the 7 courses offered with SLA workshops that had corresponding control group sections exceeded the pass rate of their control group. In four of the seven sections (57%) the SLA group outperformed the control group by an average of 23 percent.

See Appendix A Table 1

Total Group Comparison Fall 1996

When all students from the SLA population are compared to all students in the control groups, **20 percent more of the SLA population earned a C- or better grade in individual courses (72% to 60%).** This higher level of performance was statistically significant. The two groups had no statistical difference in their level of academic readiness as measured by ACT composite and high school GPA.

Winter Semester 1997 Complete Findings

SLA workshops were offered as part of 17 courses (41 sections) during winter semester 1997. These course offerings were from the Colleges of Business, Technology, Allied Health and Arts and Sciences. Twenty professors took part in the SLA project and the project served 1078 students. This brought the total SLA population served for the year to 2245 students.

Winter 1997 Findings -- Course Pass Rate Comparisons

- A. Comparison of C- or better course pass rate averages between the SLA population and all other students who took the course over the last three winter semesters.**

Eighty-eight percent (88%) or 15 of 17 SLA courses exceeded the pass rate average for the course. Thirteen (13) of the 15 courses (87%) exceeded the pass rate average by 10 percent or more. Sixty-five percent (65%) of the SLA courses exceeded the pass rate average by 15 percent or more.

See Appendix B Table 3

- B. Comparison of C- or better course pass rate averages between the SLA population and all other university students who took the same course winter 1997.**

Eighty-eight percent (88%) of the SLA courses exceeded the pass rate average of all non-SLA students who took the same courses winter 1997.

Seventy-five percent (75%) of the SLA courses exceeded the pass rate average of all non-SLA students by 10 percent or more.

See Appendix B Table 2

- C. Comparison of (C- or better) pass rates between the SLA students and the control group students winter 1997.**

Twelve (12) of the 17 courses offered with SLA workshops had corresponding course sections that were designated as control group sections. Of the 12 designated control group sections, the **SLA minority population outperformed the control group in nine of the courses (75%). In eight of the nine courses, the SLA students exceeded the pass rate average of the control group by at least 10 percent.**

See Appendix B Table 1

Total Group Comparison Winter 1997

When the C- or better pass rate of all SLA students is compared to all students in the control groups, **21% more of the SLA population earned a C- or better grade in the courses in which they enrolled.** This 21 percent improvement occurred despite the control groups being better prepared academically. The level of academic readiness of the control group was statistically significant to .000 in ACT composite and .048 in high school GPA. The higher level of performance by the SLA group was statistically significant.

SLA Project Impact on Instruction

The overall goal was to develop a new instructional methodology that would create systemic change in the way in which content course instruction is delivered at FSU and would result in improved pass rates for all FSU students in high-risk-for-failure gateway courses.

Outcome

This goal was accomplished. Ferris State has adopted the SLA Project into its instructional framework. The University has allocated \$150,000 for the operation of the program beginning fall 1997. Student retention has increased seven percent since the SLA project began in 1994. Fifty faculty have participated in the SLA Project since 1994.

Student pass rates improved in 87 percent of the gateway courses offered with SLA support during the fall semesters with pass rates improving by 10 percent or more in 70 percent of the courses. During winter semester 1997, student pass rates improved in 79 percent of the courses, and in 58 percent of the courses, pass rates improved by 10 percent or more.

PART II FINDINGS -- SLA MINORITY POPULATION

Description of SLA Minority Population Fall 1996

There were 285 minority students who participated in the SLA project. Their average ACT composite was 14.2. They had an average high school GPA of 2.4. The population earned an average of 9.2 college credit hours fall semester 1996.

Description of Minority Control Group Population Fall 1996

There were 91 minority students who participated in the control group sections. Their average ACT composite was 15.4. They had an average high school GPA of 2.52. The population earned an average of 10.3 college credit hours fall semester 1996.

Summary of Minority Findings Fall Semester 1996

1. In **92 percent of the courses** offered with SLA support during fall 1996 (16 courses), the minority population of SLA students **equaled or exceeded the pass rate average** of all other minority students enrolled in the same courses.
See Appendix C Table 2
2. In **44 percent of the courses** (16 courses), the SLA minority population **met or exceeded the grant goal by earning a 10% or higher C- or better pass rate** as compared to the C- or better pass rate average for all sections of the course taught over the previous three fall semesters. This was accomplished despite the average ACT composite of the minority students being four points lower than the FSU average.
See Appendix C Table 3
3. In **86 percent of the SLA courses** that had **paired control group sections**, the SLA minority population **exceeded the C- or better pass rate average by more than 10 percent**.
See Appendix C Table 1
4. Seventy-five percent (75%) of the students enrolled in SLA fall semester 1996 said they would recommend to other students to take an SLA course. Only nine percent of the students enrolled in SLA courses fall 1996 indicated they would not take another course with an SLA workshop.

Description of SLA Minority Population Winter 1997

There were 286 minority students who participated in the SLA project. Their average ACT composite was 15.1. They had an average high school GPA of 2.4. The population earned an average of 8.9 college credit hours winter semester 1997.

Description of Minority Control Group Population Winter 1997

There were 95 minority students who participated in the control group sections. Their average ACT composite was 15.7. They had an average high school GPA of 2.54. The population earned an average of 9.8 college credit hours winter semester 1997.

Summary of Minority Findings for Winter Semester 1997

- *1. In **80 percent of the 15 courses** offered winter semester, the SLA minority population **exceeded the project goal of a 10 percent** improvement in course pass rate over the pass rate average of all other minorities who took the same courses winter 1997.
See Appendix D Table 2
2. In **53 percent of the courses** the minority students enrolled in SLA reached or **exceeded the pass rate average** of all university students who took the same course winter 1997.
See Appendix D Table 4
- *3. In **80 percent of the courses where control group sections** were used, the SLA minority population **exceeded the control groups by 10 percent or more**.
See Appendix D Table 1
- *4. In **33 percent of the courses**, the SLA minority population **met or exceeded the grant goal of a 10% increase** in pass rate over the pass rate average of all students who took the same courses over the past three years.
See Appendix D Table 3
5. Ninety-one percent (91%) of the students taking SLA courses winter semester indicated they would recommend enrolling in an SLA course to another student.

* Percentage reported as relative improvement compared to department average.

Fall Semester 1996 Complete Minority Findings

SLA workshops were offered as part of 16 courses (42 sections) during fall semester 1996. These course offerings were from the Colleges of Business, Technology, Allied Health, and Arts and Sciences. Twenty-three professors took part in the SLA project and the project served 285 minority students who were part of the SLA minority population.

The findings discussed in this report have been divided into three parts.

1. Part A is a comparison of the course pass rates in the SLA courses with the pass rate averages for the course over the past three years. The measure used in this comparison is those students earning a C- or better in the course.
2. Part B is a comparison of the SLA minority population with all other minorities who took the same course fall 1996.
3. Part C is a comparison of the SLA course sections with their control groups. The control groups were sections of the same course, taught by the same instructor, using the same tests and same grading procedure. T-test analysis was done in comparing the groups using input variables of ACT composite and high school GPA.

Fall 1996 Findings -- Course Pass Rate Comparisons

- A. **Comparison of C- or better course pass rates of the minority population in SLA to all other students who took the course over the past three fall semesters.**

***Forty-four percent (44%)** or 7 of 16 SLA courses **exceeded the pass rate average** for the course. Of the nine courses that did not exceed the pass rate average, four of the courses were equal to or fell short by four percent or less. **Thirty-one percent (31%)** of the SLA courses **exceeded the pass rate average by 15 percent or more.**

See Appendix C Table 3

*** SLA minority populations ACT composite was 4 points lower than the Ferris State ACT composite average of 18.8**

B. Comparison of C- or better course pass rates of the minority population in SLA courses to all other minorities who took the same course fall 1996.

Eighty-eight percent (88%) or 14 of 16 SLA courses exceeded the pass rate average of all other minority students who took the same courses fall 1996.

Seventy-five percent (75%) of the SLA courses exceeded the pass rate average of all other minorities by 10 percent or more.

See Appendix C Table 2

C. Comparison of SLA course pass rates C- or better of minority students with the control group section pass rates fall 1996.

Seven of the 16 courses offered with SLA workshops had corresponding course sections that were designated as control group sections. In four of the seven designated control group sections (57%), the SLA group outperformed the control group by an average of 23 percent.

See Appendix C Table 1

Total Minority Group Comparison Fall 1996

When all minority students from the SLA minority population are compared to all students in the control groups, 17 percent more of the SLA minority population earned a C- or better grade in their individual course (61% to 52%).

Winter Semester 1997 Complete Minority Findings

SLA workshops were offered as part of 16 courses (41 sections) during winter semester 1997. These course offerings were from the Colleges of Business, Technology, Allied Health and Arts and Sciences. Twenty professors took part in the SLA project and the project served 286 students that were part of the minority population. This brought the total minority population served for the year to 571 students. This exceeds the project's goal of 500 students by 14 percent.

Winter 1997 Findings -- Course Pass Rate Comparisons

- A. **Comparison of C- or better course pass rates of the minority population in SLA to all other students who took the course over the past three winter semesters.**

***Fifty percent (50%) or 8 of 16 SLA courses equaled or exceeded the pass rate average for the course. Of the eight courses that did not exceed the pass rate average, two of the courses fell short by eight percent or less. Thirty-one percent (31%) of the SLA courses exceeded the pass rate average by 10 percent or more.**

See Appendix D Table 3

*** SLA Minority populations ACT composite was nearly 4 points lower than the Ferris State ACT composite average of 18.8**

- B. **Comparison of C- or better course pass rates of the minority population in SLA to all other minorities who took the same course during winter 1997.**

Seventy-five percent (75%) or 12 of 16 SLA courses exceeded the pass rate average of all other minority students who took the same courses winter 1997. All 12 of the SLA courses exceeded the pass rate average of all other minorities by 10 percent or more.

See Appendix D Table 2

- C. **Comparison of SLA course pass rates C- or better of minority students with the Control Group section pass rates winter 1997.**

Eleven (11) of the 16 courses offered with SLA workshops had corresponding course sections that were designated as control group sections. Of the 11 designated control group sections, the SLA minority population outperformed the control group in nine of the courses (82%). **In all nine of the courses the SLA students exceeded the pass rate average of the control group by at least 16 percent.**

See Appendix D Table 1

Student Evaluations of SLA Project

The following are the responses of all students who enrolled in SLA courses during the 1996-97 academic year. The findings are an average of the fall and winter semesters and are expressed as percentages.

1. Students who before enrolling in an SLA course felt somewhat positive to very positive about an SLA workshop.
Result
60%
2. Students required to attend workshops six or more times.
Result
45%
3. Students who felt it was important that SLA required attendance at workshops when a student's grade dropped below a C.
Result
85%
4. Students who felt that the workshop attendance policy was very effective in causing them to attend workshops.
Result
84%
5. Students who believed the workshops were effective to very effective in helping to improve their understanding of the course material.
Result
80%
6. Students who felt the workshops were effective to very effective in preparing them for the course tests, and in helping them to better understand the professor's presentations during class.
Result
75%
7. Students who rated the facilitators as being effective to very effective.
Result
80%
8. Students who felt the facilitators were open and approachable.
Result
90%

9. Students who reported that the learning and studying techniques used by facilitators in the workshops were effective to very effective.

Result

78%

10. Students who reported that the workshops were important in helping them earn their grade for the class.

Result

68%

11. Students who indicated they would recommend enrolling in the SLA workshop to other students.

Result

88%

Project Conclusions

The three years of data on over 5000 students from 42 different courses representing 16 different disciplines clearly indicates that the SLA process can significantly improve the C- or better pass rates of students in gateway courses. This finding was true even among the most academically at-risk students. In nearly 85% of the 42 courses offered with SLA support the SLA students had higher pass rates than the pass rates of all other university students taking the same courses.

An important conclusion drawn from the first three years of the SLA Project was that students will voluntarily enroll in courses that mandate their participation in academic assistance workshops when their grade falls below a 2.0. Student evaluations indicate that over 85 percent of the students feel attendance must be required if the workshops are to effective.

The data indicated the greatest area of improved pass rates was in the four mathematics courses. It was also the area of greatest student enrollment with over 2200 students taking math courses with SLA support. **The average pass rate increases range from 24 percent in Math 010 to 45 percent in Math 115.**

The data also indicated that pass rates were higher in courses that are program specific (example Respiratory Care 119) than in general course offerings where students can choose from a variety of courses (example history or psychology). This may be due to the level of motivation students in programs have to succeed in order to keep their place in the program. However, no specific cause has been identified for this finding.

The data also indicated that in some courses the highly structured nature of SLA may promote higher course withdrawal rates. However, in most cases where this has occurred, the SLA pass rates for the course have exceeded the three-year pass rate average for the course. A possible explanation is that students must withdraw if they violate the attendance policy. Prior to SLA, when there was no attendance policy, students might have remained in the class only to receive a failing grade.

This project was well received by the faculty. More than 50 faculty participated in SLA and it continues to attract new FSU faculty each semester. In 1996-97 nine new faculty participated in the SLA program.

Final Comments

The program's success is reflected in the reduced need to advertise the SLA program, as word of mouth advertising has resulted in most SLA courses filling to capacity. In addition, **SLA is now being used as a recruiting tool by the FSU admission staff who note it as a service that students will not find on other campuses.**

The SLA Project was chosen as one of only 85 research projects nationwide to be presented at the Second National Conference on Research in Developmental Education in October 1996 in Charlotte, NC.

Three-Year Findings

In Appendix F of this report is a summary of the three-year finding of the SLA Project. This data compares the average pass rates of SLA students to all other university students in each course offered with SLA support over the past three fall and/or winter semesters. Appendix G shows the same pass rate data broken out into major subject areas. The data demonstrates the positive impact this project had on improving pass rates.

APPENDIX A

Comparison of pass rates between the SLA Students Fall 1996
and the students enrolled in the Control Groups Fall 1996

SLA STUDENTS vs CONTROL GROUP STUDENTS						
	SLA			FALL 1996		
	#	C- & Up %				
ACCT 201	25	60%				
BIOL 101	46	87%				
BIOL 108	24	83%				
CHEM 103	45	56%				
CHEM 121	45	44%				
DHYG 112	60	95%				
ECON 221	109	72%				
EEET 114	57	58%				
HIST 121	44	84%				
MATH 010	124	70%				
MATH 110	193	82%				
MATH 115	187	57%				
MATH 116	37	89%				
PHYS 211	82	79%				
RESP 119	66	92%				
PSYC 150	25	71%				
	SLA		CONTROL		Pass Rate Impact	
	#	C- & Up %	#	C- & Up %	+ - %	
	25	60%	37	41%	46%	
	46	87%		NC		
	24	83%	48	75%	11%	
	45	56%	69	51%	10%	
	45	44%		NC		
	60	95%		NC		
	109	72%	115	71%	1%	
	57	58%		NC		
	44	84%		NC		
	124	70%	76	59%	19%	
	193	82%		NC		
	187	57%	103	53%	8%	
	37	89%	23	65%	37%	
	82	79%		NC		
	66	92%		NC		
	25	71%		NC		

Comparison of pass rates between the SLA Students Fall 1996 and
All Other Students who took the same courses Fall 1996 without SLA support

SLA STUDENTS vs ALL OTHER STUDENTS									
FALL 1996									
	SLA			ALL			Pass Rate Impact		
	#	C- & Up %		#	C- & Up %		+ - %		
ACCT 201	25	60%		371	51%		18%		
BIOL 101	46	87%		121	70%		24%		
BIOL 108	24	83%		165	73%		14%		
CHEM 103	45	56%		115	50%		12%		
CHEM 121	45	44%		187	57%		-23%		
DHYG 112	60	95%		60	95%		*		
ECON 221	109	72%		355	64%		13%		
EEET 114	57	58%					*		
HIST 121	44	84%		46	67%		25%		
MATH 010	124	70%		228	44%		59%		
MATH 110	193	82%		731	38%		115%		
MATH 115	187	57%		365	45%		27%		
MATH 116	37	89%		210	48%		85%		
PHYS 211	82	79%		94	70%		13%		
RESP 119	66	92%					*		
PSYC 150	25	61%		493	58%		5%		

Comparison of pass rates between the SLA Students Fall 1996 and the average pass rate of
All Other Students who took the same courses over the past three fall semesters 1994-95-96

SLA STUDENTS FALL 1996 vs THREE YEAR PASS RATE							
SLA STUDENTS					THREE YEAR AVERAGE		
					ALL UNIVERSITY STUDENTS		
	#	C- & Up %			#	C- & Up %	Pass Rate Impact + - %
ACCT 201	24	60%			1335	56%	8%
BIOL 101	46	87%			499	69%	26%
BIOL 108	24	83%			568	69%	20%
CHEM 103	45	56%			580	57%	-2%
CHEM 121	45	44%			849	65%	-32%
DHYG 112	60	95%			177	89%	7%
ECON 221	109	72%			1393	58%	24%
EEET 11	57	58%			121	48%	21%
HIST 121	44	84%			490	58%	45%
MATH 010	124	70%			1128	57%	23%
MATH 110	193	82%			2839	48%	71%
MATH 115	187	57%			1748	49%	16%
MATH 116	37	89%			755	52%	71%
PHYS 211	82	79%			565	75%	5%
RESP 119	66	92%			87	84%	10%
PSYC 150	25	61%			1662	59%	3%

APPENDIX B

Comparison of pass rates between the SLA Students Winter 1997
and the students enrolled in the Control Groups Winter 1997

SLA STUDENTS vs CONTROL GROUP STUDENTS					
			WINTER 1997		
	SLA			CONTROL	
	#	C- & Up %		#	C- & Up %
					Pass Rate Impact
ACCT 201	34	74%		68	54%
BIOL 101	23	78%		52	71%
BIOL 205	114	75%		48	56%
BLAW 321	15	40%		35	34%
CHEM 103	52	62%		23	70%
CHEM 122	42	67%			NC
ECON 221	38	50%		40	57%
ECON 222	53	85%		74	68%
HIST 121	44	84%		47	51%
MATH 010	84	73%		19	84%
MATH 110	146	47%			NC
MATH 115	203	77%		49	49%
MATH 116	18	83%		14	79%
NURS 222	10	100%			NC
PHYS 211	69	68%			NC
PSYC 150	66	71%		38	50%
SOCY 121	82	82%			NC

Comparison of pass rates between the SLA Students Winter 1997 and
All Other Students who took the same courses Winter 1997 without SLA support

SLA STUDENTS vs ALL OTHER STUDENTS						
		WINTER 1997				
SLA				ALL		Pass Rate Impact + - %
#	C- & Up %			#	C- & Up %	
ACCT 201	34	74%		292	65%	14%
BIOL 101	23	78%		52	71%	10%
BIOL 205	114	75%		48	56%	34%
BLAW 321	15	40%		123	17%	-58%
CHEM 103	52	62%		75	51%	22%
CHEM 122	42	67%		96	64%	5%
ECON 221	38	50%		328	60%	-17%
ECON 222	53	85%		151	69%	23%
HIST 121	44	84%		47	51%	65%
MATH 010	84	73%		93	53%	38%
MATH 110	146	47%		454	35%	34%
MATH 115	203	77%		297	47%	64%
MATH 116	18	83%		146	71%	17%
NURS 222	10	100%		31	100%	0%
PHYS 211	69	68%		96	65%	5%
PSYC 150	66	71%		587	55%	29%
SOCY 121	82	82%		323	59%	39%

Comparison of pass rates between the SLA Students Winter 1997 and the average pass rate of All Other Students who took the same courses over the past three winter semesters 1995-96-97

SLA STUDENTS WINTER 1997 vs THREE YEAR PASS RATE									
SLA STUDENTS					THREE YEAR AVERAGE				
					ALL UNIVERSITY STUDENTS				
					Pass Rate Impact				
	#	C- & Up %			#	C- & Up %	+ - %		
ACCT 201	34	74%			1078	58%	28%		
BIOL 101	23	78%			336	62%	26%		
BIOL 205	114	75%			403	69%	9%		
BLAW 321	15	40%			387	70%	-42%		
CHEM 103	52	62%			402	56%	11%		
CHEM 122	42	67%			525	58%	16%		
ECON 221	38	50%			1326	54%	-7%		
ECON 222	53	85%			649	66%	29%		
HIST 121	44	84%			382	54%	56%		
MATH 010	84	73%			661	56%	30%		
MATH 110	146	47%			1911	41%	15%		
MATH 115	203	77%			1607	50%	54%		
MATH 116	18	83%			488	59%	41%		
NURS 222	10	100%			125	95%	5%		
PHYS 211	69	68%			517	64%	12%		
PSYC 150	66	71%			2075	58%	22%		
SOCY 121	82	82%			1378	62%	32%		

APPENDIX C

Comparison of pass rates between the SLA Minority Students Fall 1996 and
Control Group Minority Students who took the same courses Fall 1996 without SLA support

SLA MINORITY STUDENTS				MINORITIES ENROLLED			
FALL 1996				CONTROL GROUP FALL 1996			
	#	C- & Up %	W%	#	C- & Up %	W%	Pass Rate Impact + -%
ACCT 201	5	60%	20%	4	25%	25%	140%
BIOL 101	21	95%	5%		NC		
BIOL 108	7	57%	29%	6	83%	0%	-29%
CHEM 103	11	36%	9%	13	8%	46%	460%
CHEM 121	8	38%	25%		NC		
DHYG 112	5	100%	0%		NC		
ECON 221	24	54%	17%	25	68%	0%	-21%
EEET 114	10	20%	40%		NC		
HIST 121	16	81%	6%		NC		
MATH 010	58	62%	21%	25	56%	20%	11%
MATH 110	46	74%	11%		NC		
MATH 115	47	49%	34%	15	60%	7%	-18%
MATH 116	4	50%	0%	3	0%	67%	*
PHYS 211	11	55%	18%		NC		
PSYC 150	16	44%	38%		NC		
RESP 119	4	100%	0%		NC		

NC - No Control Group

* Number too small to be meaningful

Comparison of pass rates between the SLA Minority Students Fall 1996 and
All Other Minority Students who took the same courses Fall 1996 without SLA support

SLA MINORITY STUDENTS				ALL OTHER MINORITY STUDENTS			
FALL 1996				FALL 1996			
	#	C- & Up %	W%	#	C- & Up %	W%	Pass Rate Impact + - %
ACCT 201	5	60%	20%	53	38%	21%	58%
BIOL 101	21	95%	5%	31	65%	13%	46%
BIOL 108	7	57%	29%	19	74%	11%	-23%
CHEM 103	11	36%	9%	20	15%	45%	140%
CHEM 121	8	38%	25%	17	35%	35%	9%
DHYG 112	5	100%	0%				*
ECON 221	24	54%	17%	56	54%	13%	0%
EEET 114	10	20%	40%				*
HIST 121	16	81%	6%	6	33%	50%	145%
MATH 010	58	62%	21%	102	37%	13%	68%
MATH 110	46	74%	11%	154	30%	27%	146%
MATH 115	47	49%	34%	41	44%	29%	11%
MATH 116	4	50%	0%	19	26%	5%	92%
PHYS 211	11	55%	18%	11	36%	18%	52%
PSYC 150	16	44%	38%	90	33%	20%	33%
RESP 119	4	100%	0%				*

* No Other Sections Offered

TABLE 2

Comparison of pass rates between the SLA Minority Students Fall 1996 and All University
Students who took the same courses over the past three fall semesters 1994-95-96

SLA MINORITY STUDENTS				ALL UNIVERSITY STUDENTS			
FALL 1996				FALL 1994-95-96			
	#	C- & Up %	W%		#	C- & Up %	W%
							Pass Rate Impact + - %
ACCT 201	5	60%	20%		1335	56%	19%
BIOL 101	21	95%	5%		499	69%	7%
BIOL 108	7	57%	29%		568	69%	38%
CHEM 103	11	36%	9%		580	57%	-17%
CHEM121	8	38%	25%		849	65%	-37%
DHYG 112	5	100%	0%		177	89%	-42%
ECON 221	24	54%	17%		1393	58%	12%
EEET 114	10	20%	40%		121	48%	-7%
HIST 121	16	81%	6%		490	58%	-58%
MATH 010	58	62%	21%		1128	57%	39%
MATH 110	46	74%	11%		2839	48%	9%
MATH 115	47	49%	34%		1748	49%	54%
MATH 116	4	50%	0%		755	52%	0%
PHYS 211	11	55%	18%		565	75%	-4%
PSYC 150	16	44%	38%		1662	59%	-27%
RESP 119	4	100%	0%		87	84%	-25%
						5%	19%

APPENDIX D

Comparison of pass rates between the SLA Minority Students Winter 1997 and
Control Group Minority Students who took the same courses Winter 1997 without SLA support

	SLA MINORITY STUDENTS			MINORITIES ENROLLED			
	WINTER 1997			CONTROL GROUP WINTER 1997			
	#	C- & Up %	W%	#	C- & Up %	W%	Pass Rate Impact +-%
ACCT 201	4	25%	50%	11	64%	36%	-60%
BIOL 101	11	73%	18%	12	50%	17%	46%
BIOL 205	16	56%	6%	8	38%	50%	47%
BLAW 321	4	50%	0%	9	22%	0%	127%
CHEM 103	22	50%	18%	5	20%	40%	150%
CHEM 122	8	38%	13%		NC		
ECON 221	3	67%	33%	3	0%	33%	*
ECON 222	13	69%	8%	13	46%	23%	50%
HIST 121	11	64%	0%	6	17%	17%	276%
MATH 010	44	70%	9%	8	75%	0%	7%
MATH 110	52	27%	19%		NC		
MATH 115	51	71%	10%	11	55%	0%	29%
PHYS 211	9	67%	22%		NC		
PSYC 150	20	45%	20%	5	20%	60%	125%
SOCY 121	27	74%	4%		NC		

NC - No Control Group

TABLE 1

* Number too small to be meaningful

62

42

Comparison of pass rates between the SLA Minority Students Winter 1997 and All University Students who took the same courses over the past three winter semesters 1995-96-97

	SLA MINORITY STUDENTS		ALL UNIVERSITY STUDENTS	
	WINTER 1997		WINTER 1995-96-97	
	#	C- & Up %	#	C- & Up %
				Pass Rate Impact + - %
ACCT 201	4	25%	1078	58%
BIOL 101	11	73%	336	62%
BIOL 205	16	56%	403	69%
BLAW 321	4	50%	387	70%
CHEM 103	22	50%	402	56%
CHEM 122	8	38%	525	58%
ECON 221	3	67%	1326	54%
ECON 222	13	69%	649	66%
HIST 121	11	64%	382	54%
MATH 010	44	70%	661	56%
MATH 110	52	27%	1911	41%
MATH 115	51	71%	1607	50%
PHYS 211	9	67%	517	64%
PSYC 150	20	45%	2075	58%
SOCY 121	27	74%	1378	62%

TABLE 4

APPENDIX E

Comparison of the average pass rates, withdrawal rates and failure rates over the past three fall semesters between the SLA Students and All Other Students who took the same courses over the past three fall semesters 1994-95-96

THREE YEAR SLA AVG vs THREE YEAR UNIVERSITY AVG													
Pass Rates				Withdrawals				Failures					
SLA #	SLA C- & Up %	SLA C- & Up #	ALL #	ALL C- & Up %	ALL C- & Up #	SLA W %	SLA W #	ALL W %	ALL W #	SLA F %	SLA F #	ALL F %	ALL F #
Totals													
F-94, 95, 96													
ACCT 201	47	64%	30	1335	56%	753	23%	11	19%	260	6%	3	13%
AUTO 117	13	85%	11	88	76%	67	0%	0	2%	2	0%	0	6%
BIOL 101	88	77%	68	499	69%	344	11%	10	7%	37	6%	5	11%
BIOL 108	47	85%	40	568	69%	392	4%	2	13%	72	4%	2	6%
BIOL 109	33	64%	21	635	72%	459	15%	5	10%	63	9%	3	6%
BIOL 121	24	88%	21	746	68%	511	4%	1	8%	60	0%	0	11%
CHEM 103	95	59%	56	580	57%	332	15%	14	17%	99	11%	10	14%
CHEM 121	138	58%	80	849	65%	554	21%	29	15%	130	4%	5	6%
COMM 105	28	89%	25	1447	80%	1163	0%	0	5%	70	7%	2	5%
DHYG 112	60	95%	57	177	89%	158	2%	1	1%	2	0%	0	1%
ECON 221	139	71%	99	1393	58%	801	7%	10	12%	168	11%	15	12%
EEET 114	57	58%	33	121	48%	58	19%	11	22%	27	11%	6	17%
HIST 121	133	71%	94	490	58%	284	14%	18	12%	58	11%	15	16%
MATH 010	241	71%	170	1128	57%	638	11%	26	13%	146	10%	24	18%
MATH 110	347	71%	247	2839	48%	1370	12%	40	18%	511	7%	23	19%
MATH 115	397	63%	250	1748	49%	865	12%	48	18%	317	9%	34	14%
MATH 116	139	68%	94	755	52%	396	12%	16	13%	100	11%	15	20%
PHYS 211	165	75%	123	565	75%	425	10%	16	9%	49	1%	1	2%
PSYC 150	119	66%	78	1662	59%	973	20%	24	14%	226	7%	8	14%
RESP 119	53	91%	48	87	84%	73	4%	2	5%	4	0%	0	7%
SOCY 121	104	75%	78	1291	68%	884	9%	9	12%	149	8%	8	8%
UNIV 176	35	74%	26	411	64%	263	9%	3	14%	56	14%	5	16%
Totals													
F-94-95-96	2502	70%	1749	19414	61%	11763	12%	296	13%	2606	7%	184	13%
													2417

TABLE 1

Effects SLA had on pass rate improvement over the past three fall semesters when compared with the University's average pass rate of All Other Students who took the same courses over the past three fall semesters 1994-95-96

SLA STUDENT THREE YEAR AVG vs ALL STUDENT THREE YEAR AVG						
FALL 1994-95-96						
PASS RATE SUMMARY						
COURSE	SLA STUDENTS		ALL STUDENTS		Pass Rate Impact	
	#	C- & Up %	#	C- & Up %	+ - %	
ACCT 201	47	64%	1335	56%	14%	
AUTO 117	13	85%	88	76%	12%	
BIOL 101	88	77%	499	69%	12%	
BIOL 108	47	85%	568	69%	23%	
BIOL 109	33	64%	635	72%	-11%	
BIOL 121	24	88%	746	68%	29%	
CHEM 103	95	59%	580	57%	4%	
CHEM 121	138	58%	849	65%	-11%	
COMM 105	28	89%	1447	80%	11%	
DHYG 112	60	95%	177	89%	7%	
ECON 221	139	71%	1393	58%	22%	
EEET 114	57	58%	121	48%	21%	
HIST 121	133	71%	490	58%	22%	
MATH 010	241	71%	1128	57%	25%	
MATH 110	347	71%	2839	48%	48%	
MATH 115	397	63%	1748	49%	29%	
MATH 116	139	68%	755	52%	31%	
PHYS 211	165	75%	565	75%	0%	
PSYC 150	119	66%	1662	59%	12%	
RESP 119	53	91%	87	84%	8%	
SOCY 121	104	75%	1291	68%	10%	
UNIV 106	39	67%	867	65%	3%	
UNIV 176	35	74%	411	64%	16%	

APPENDIX F

Comparison of the average pass rates, withdrawal rates and failure rates over the past three winter semesters between the SLA Students and All Other Students who took the same courses over the past three winter semesters 1995-96-97

THREE YEAR SLA AVG vs THREE YEAR UNIVERSITY AVG													
WINTER 1995-96-97													
Pass Rates				Withdrawals				Failures					
SLA #	SLA C- & Up %	SLA C- & Up #	ALL #	ALL C- & Up %	ALL C- & Up #	SLA W %	SLA W #	ALL W %	ALL W #	SLA F %	SLA F #	ALL F %	ALL F #
Totals													
W-95,96,97													
ACCT 201	77	58%	39	1078	58%	626	18%	14	21%	221	8%	6	12%
BIOL 101	59	71%	42	336	62%	207	15%	9	14%	47	12%	7	11%
BIOL 121	24	75%	18	156	72%	113	8%	2	6%	9	8%	2	12%
BIOL 205	158	77%	120	403	69%	279	4%	6	11%	44	4%	6	7%
BLAW 321	15	40%	6	387	70%	270	13%	2	5%	19	27%	4	10%
CHEM 103	185	57%	105	402	56%	227	17%	32	0	82	16%	30	12%
CHEM 122	122	62%	76	525	58%	305	17%	21	18%	96	4%	5	5%
COMM 105	33	73%	24	1611	77%	1248	6%	2	7%	107	18%	6	7%
ECON 221	93	56%	42	1326	54%	718	13%	12	11%	149	16%	15	14%
ECON 222	53	85%	45	649	66%	428	4%	2	8%	52	0%	0	6%
ENGL 074	20	60%	12	187	73%	136	5%	1	12%	23	35%	7	15%
HIST 121	83	80%	67	382	54%	208	7%	6	9%	36	11%	9	23%
HIST 122	27	81%	22	726	60%	433	15%	4	13%	92	4%	1	10%
MATH 010	163	69%	112	661	56%	367	13%	22	11%	70	11%	18	17%
MATH 110	408	49%	201	1911	41%	778	17%	69	22%	425	19%	77	22%
MATH 115	457	80%	372	1607	50%	803	6%	28	18%	293	5%	25	15%
MATH 116	91	81%	74	488	59%	288	10%	9	14%	67	4%	4	11%
NURS 222	10	100%	10	125	95%	119	0%	0	3%	4	0%	0	0%
PHYS 211	144	75%	108	517	64%	331	8%	12	12%	62	2%	3	9%
PSYC 150	182	56%	102	2075	58%	1202	25%	46	14%	297	14%	26	16%
SOCY 121	212	89%	189	1378	62%	852	3%	7	12%	176	4%	8	9%
UNIV 106	20	70%	14	250	56%	139	0%	0	22%	56	25%	5	14%
Totals													
W-95,96,97	2636	69%	1800	17180	61%	10077	11%	306	13%	2427	12%	264	12%
													2224

TABLE 1

Effects SLA had on pass rate improvement over the past three winter semesters when compared with the University's average pass rate of All Other Students who took the same courses over the past three winter semesters 1995-96-97

SLA STUDENT THREE-YEAR AVG vs. ALL STUDENT THREE-YEAR AVG		WINTER 1995-96-97		PASS RATE SUMMARY		ALL STUDENTS		PASS RATE IMPACT	
		SLA STUDENTS				#	C- & Up %		+ - %
		#	C- & Up %			#	C- & Up %		
ACCT 201		77	58%			1078	58%		0%
BIOL 101		59	71%			336	62%		15%
BIOL 121		24	75%			156	72%		4%
BIOL 205		158	77%			403	69%		12%
CHEM 103		185	57%			402	56%		2%
CHEM 122		122	62%			525	58%		7%
COMM 105		33	73%			1611	77%		-5%
ECON 221		93	56%			1326	54%		4%
ENGL 074		20	60%			187	73%		-18%
HIST 121		83	80%			382	54%		48%
HIST 122		27	81%			726	60%		35%
MATH 010		163	69%			661	56%		23%
MATH 110		408	49%			1911	41%		20%
MATH 115		457	80%			1607	50%		60%
MATH 116		91	81%			488	59%		37%
PHYS 211		144	75%			517	64%		17%
PSYC 150		182	56%			2075	58%		-3%
SOCY 121		212	89%			1378	62%		44%
UNIV 106		20	70%			250	56%		25%

TABLE 2

APPENDIX G

BIOLOGY

FALL 94-95-96						
PASS RATE SUMMARY						
	SLA	SLA		ALL	ALL	Pass Rate Impact
COURSE	#	C- & Up %		#	C- & Up %	+ - %
BIOL 101	88	77%		499	69%	12%
BIOL 108	47	85%		568	69%	23%
BIOL 109	33	64%		635	72%	11
BIOL 121	24	88%		746	68	29
WINTER 95-96-97						
PASS RATE SUMMARY						
	SLA	SLA		ALL	ALL	Pass Rate Impact
COURSE	#	C- & Up %		#	C- & Up %	+ - %
BIOL 101	59	71%		336	62%	15%
BIOL 121	24	75%		156	72%	4%
BIOL 205	158	77%		403	69%	12%

TABLE 1

CHEMISTRY

FALL 94-95-96							
PASS RATE SUMMARY							
	SLA	SLA		ALL	ALL	Pass Rate Impact	
COURSE	#	C- & Up %		#	C- & Up %	+ - %	
CHEM 103	95	59%		580	57%	4%	
CHEM 121	138	58%		849	65%	-11%	
WINTER 95-96-97							
PASS RATE SUMMARY							
	SLA	SLA		ALL	ALL	Pass Rate Impact	
COURSE	#	C- & Up %		#	C- & Up %	+ - %	
CHEM 103	158	57%		402	56%	2%	
CHEM 122	122	62%		525	58%	7%	

SOCY - HIST - PSYC

		FALL 94-95-96					
		PASS RATE SUMMARY					
	SLA	SLA		ALL	ALL	Pass Rate Impact	
COURSE	#	C- & Up %		#	C- & Up %	+ - %	
SOCY 121	104	75%		1291	68%	10%	
HIST 121	133	71%		490	58%	22%	
PSYC 150	119	66%		1662	59%	12%	
		WINTER 95-96-97					
		PASS RATE SUMMARY					
	SLA	SLA		ALL	ALL	Pass Rate Impact	
COURSE	#	C- & Up %		#	C- & Up %	+ - %	
SOCY 121	212	89%		1378	62%	44%	
HIST 121	83	80%		382	54%	48%	
HIST 122	27	81%		726	60%	35%	
PSYC 150	182	56%		2075	58%	-3%	

TABLE 3

MATH

		FALL 94-95-96				
		PASS RATE SUMMARY				
	SLA	SLA		ALL	ALL	Pass Rate Impact
COURSE	#	C- & Up %		#	C- & Up %	+ - %
MATH 010	241	71%		1128	57%	25%
MATH 110	347	71%		2839	48%	48%
MATH 115	397	63%		1748	49%	29%
MATH 116	139	68%		755	52%	31%
		WINTER 95-96-97				
		PASS RATE SUMMARY				
	SLA	SLA		ALL	ALL	Pass Rate Impact
COURSE	#	C- & Up %		#	C- & Up %	+ - %
MATH 010	163	69%		661	56%	23%
MATH 110	408	49%		1911	41%	20%
MATH 115	457	80%		1607	50%	60%
MATH 116	91	81%		488	59%	37%

TABLE 4



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